



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperServer 1029U-TR4 (X11DPU , Intel Xeon Gold 5222)

SPECrate®2017\_int\_base = 65.4

SPECrate®2017\_int\_peak = 67.7

CPU2017 License: 001176

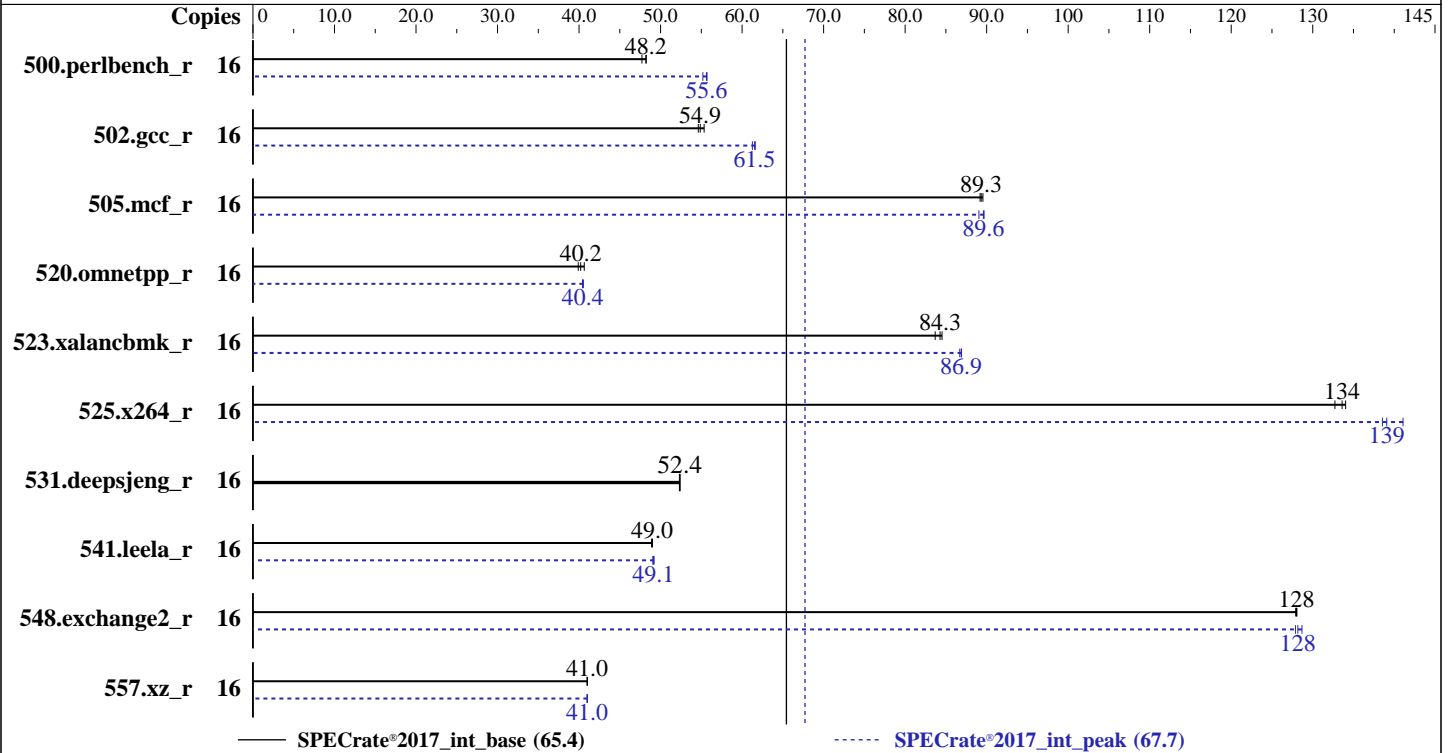
Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: Aug-2019

Hardware Availability: Apr-2019

Software Availability: May-2019



### Hardware

CPU Name: Intel Xeon Gold 5222  
 Max MHz: 3900  
 Nominal: 3800  
 Enabled: 8 cores, 2 chips, 2 threads/core  
 Orderable: 1,2 chips  
 Cache L1: 32 KB I + 32 KB D on chip per core  
 L2: 1 MB I+D on chip per core  
 L3: 16.5 MB I+D on chip per chip  
 Other: None  
 Memory: 768 GB (24 x 32 GB 2Rx4 PC4-2933Y-R)  
 Storage: 1 x 200 GB SATA III SSD  
 Other: None

### Software

OS: SUSE Linux Enterprise Server 12 SP4 (x86\_64)  
 Kernel 4.12.14-94.41-default  
 Compiler: C/C++: Version 19.0.4.227 of Intel C/C++ Compiler for Linux;  
 Fortran: Version 19.0.4.227 of Intel Fortran Compiler for Linux  
 Parallel: No  
 Firmware: Version 3.1 released Apr-2019  
 File System: xfs  
 System State: Run level 3 (multi-user)  
 Base Pointers: 64-bit  
 Peak Pointers: 32/64-bit  
 Other: jemalloc memory allocator V5.0.1  
 Power Management: --



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperServer 1029U-TR4 (X11DPU , Intel Xeon Gold 5222)

SPECrate®2017\_int\_base = 65.4

SPECrate®2017\_int\_peak = 67.7

CPU2017 License: 001176  
Test Sponsor: Supermicro  
Tested by: Supermicro

Test Date: Aug-2019  
Hardware Availability: Apr-2019  
Software Availability: May-2019

## Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	16	534	47.7	<b><u>529</u></b>	<b><u>48.2</u></b>	528	48.2	16	462	55.2	<b><u>458</u></b>	<b><u>55.6</u></b>	457	55.7
502.gcc_r	16	415	54.6	409	55.3	<b><u>413</u></b>	<b><u>54.9</u></b>	16	368	61.6	<b><u>368</u></b>	<b><u>61.5</u></b>	370	61.3
505.mcf_r	16	289	89.5	<b><u>289</u></b>	<b><u>89.3</u></b>	290	89.2	16	290	89.1	<b><u>289</u></b>	<b><u>89.6</u></b>	288	89.7
520.omnetpp_r	16	526	39.9	<b><u>522</u></b>	<b><u>40.2</u></b>	517	40.6	16	<b><u>519</u></b>	<b><u>40.4</u></b>	519	40.4	518	40.5
523.xalancbmk_r	16	202	83.7	200	84.5	<b><u>200</u></b>	<b><u>84.3</u></b>	16	<b><u>194</u></b>	<b><u>86.9</u></b>	194	86.9	195	86.7
525.x264_r	16	<b><u>210</u></b>	<b><u>134</u></b>	209	134	211	133	16	202	139	<b><u>201</u></b>	<b><u>139</u></b>	199	141
531.deepsjeng_r	16	<b><u>350</u></b>	<b><u>52.4</u></b>	350	52.4	351	52.3	16	<b><u>350</u></b>	<b><u>52.4</u></b>	350	52.4	351	52.3
541.leela_r	16	541	49.0	<b><u>541</u></b>	<b><u>49.0</u></b>	542	48.9	16	540	49.0	<b><u>539</u></b>	<b><u>49.1</u></b>	539	49.2
548.exchange2_r	16	328	128	327	128	<b><u>327</u></b>	<b><u>128</u></b>	16	<b><u>327</u></b>	<b><u>128</u></b>	328	128	326	129
557.xz_r	16	421	41.0	421	41.0	<b><u>421</u></b>	<b><u>41.0</u></b>	16	421	41.0	<b><u>421</u></b>	<b><u>41.0</u></b>	422	41.0

SPECrate®2017\_int\_base = 65.4

SPECrate®2017\_int\_peak = 67.7

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

## Submit Notes

The numactl mechanism was used to bind copies to processors. The config file option 'submit' was used to generate numactl commands to bind each copy to a specific processor. For details, please see the config file.

## Operating System Notes

Stack size set to unlimited using "ulimit -s unlimited"

## General Notes

Environment variables set by runcpu before the start of the run:  
LD\_LIBRARY\_PATH = "/home/cpu2017/lib/intel64:/home/cpu2017/lib/ia32:/home/cpu2017/je5.0.1-32"

Binaries compiled on a system with 1x Intel Core i9-7900X CPU + 32GB RAM  
memory using Redhat Enterprise Linux 7.5  
Transparent Huge Pages enabled by default  
Prior to runcpu invocation  
Filesystem page cache synced and cleared with:  
sync; echo 3> /proc/sys/vm/drop\_caches  
runcpu command invoked through numactl i.e.:  
numactl --interleave=all runcpu <etc>

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown) is mitigated in the system as tested and documented.  
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1) is mitigated in the system as tested and documented.  
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2)

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperServer 1029U-TR4 (X11DPU , Intel Xeon Gold 5222)

SPECrate®2017\_int\_base = 65.4

SPECrate®2017\_int\_peak = 67.7

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** Aug-2019  
**Hardware Availability:** Apr-2019  
**Software Availability:** May-2019

### General Notes (Continued)

is mitigated in the system as tested and documented.  
jemalloc, a general purpose malloc implementation  
built with the RedHat Enterprise 7.5, and the system compiler gcc 4.8.5  
sources available from jemalloc.net or <https://github.com/jemalloc/jemalloc/releases>

### Platform Notes

BIOS Settings:

Monitor/Mwait = Enable  
Power Technology = Custom  
Power Performance Tuning = BIOS Controls EPB  
ENERGY\_PERF\_BIAS\_CFG mode = Extreme Performance  
Hardware P-state = Out of Band Mode  
Stale AtoS = Disable  
SDDC = Disable  
ADDDC Sparing = Disable  
Patrol Scrub = Disable  
Sysinfo program /home/cpu2017/bin/sysinfo  
Rev: r5974 of 2018-05-19 9bcde8f2999c33d61f64985e45859ea9  
running on 135-178-171 Wed Aug 7 15:28:30 2019

SUT (System Under Test) info as seen by some common utilities.  
For more information on this section, see  
<https://www.spec.org/cpu2017/Docs/config.html#sysinfo>

From /proc/cpuinfo

```
model name : Intel(R) Xeon(R) Gold 5222 CPU @ 3.80GHz
 2 "physical id"s (chips)
 16 "processors"
cores, siblings (Caution: counting these is hw and system dependent. The following
excerpts from /proc/cpuinfo might not be reliable. Use with caution.)
  cpu cores : 4
  siblings  : 8
  physical 0: cores 0 5 8 12
  physical 1: cores 1 5 8 12
```

From lscpu:

```
Architecture:          x86_64
CPU op-mode(s):        32-bit, 64-bit
Byte Order:            Little Endian
CPU(s):                16
On-line CPU(s) list:   0-15
Thread(s) per core:    2
Core(s) per socket:    4
Socket(s):             2
NUMA node(s):         4
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperServer 1029U-TR4 (X11DPU , Intel Xeon Gold 5222)

SPECrate®2017\_int\_base = 65.4

SPECrate®2017\_int\_peak = 67.7

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** Aug-2019  
**Hardware Availability:** Apr-2019  
**Software Availability:** May-2019

### Platform Notes (Continued)

```

Vendor ID:           GenuineIntel
CPU family:         6
Model:              85
Model name:         Intel(R) Xeon(R) Gold 5222 CPU @ 3.80GHz
Stepping:           7
CPU MHz:            3800.000
CPU max MHz:        3900.0000
CPU min MHz:        1200.0000
BogoMIPS:           7600.00
Virtualization:     VT-x
L1d cache:          32K
L1i cache:          32K
L2 cache:           1024K
L3 cache:           16896K
NUMA node0 CPU(s): 0,2,8,10
NUMA node1 CPU(s): 1,3,9,11
NUMA node2 CPU(s): 4,6,12,14
NUMA node3 CPU(s): 5,7,13,15

```

```

Flags:               fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov
pat pse36 clflush dts acpi mmx fxsr sse sse2 ss ht tm pbe syscall nx pdpe1gb rdtscp
lm constant_tsc art arch_perfmon pebs bts rep_good nopl xtopology nonstop_tsc cpuid
aperfmpperf pni pclmulqdq dtes64 monitor ds_cpl vmx smx est tm2 ssse3 sdbg fma cx16
xtpr pdcm pcid dca sse4_1 sse4_2 x2apic movbe popcnt tsc_deadline_timer aes xsave
avx f16c rdrand lahf_lm abm 3dnowprefetch cpuid_fault epb cat_l3 cdp_l3
invpcid_single intel_ppin ssbd mba ibrs ibpb stibp tpr_shadow vnmi flexpriority ept
vpid fsgsbase tsc_adjust bmi1 hle avx2 smep bmi2 erms invpcid rtm cqm mpx rdt_a
avx512f avx512dq rdseed adx smap clflushopt clwb intel_pt avx512cd avx512bw avx512vl
xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
dtherm ida arat pln pts pku ospke avx512_vnni flush_lld arch_capabilities

```

```

/proc/cpuinfo cache data
cache size : 16896 KB

```

```

From numactl --hardware WARNING: a numactl 'node' might or might not correspond to a
physical chip.

```

```

available: 4 nodes (0-3)
node 0 cpus: 0 2 8 10
node 0 size: 192102 MB
node 0 free: 191796 MB
node 1 cpus: 1 3 9 11
node 1 size: 193524 MB
node 1 free: 193266 MB
node 2 cpus: 4 6 12 14
node 2 size: 193495 MB
node 2 free: 193261 MB
node 3 cpus: 5 7 13 15
node 3 size: 193522 MB

```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperServer 1029U-TR4 (X11DPU , Intel Xeon Gold 5222)

SPECrate®2017\_int\_base = 65.4

SPECrate®2017\_int\_peak = 67.7

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** Aug-2019  
**Hardware Availability:** Apr-2019  
**Software Availability:** May-2019

### Platform Notes (Continued)

```
node 3 free: 193259 MB
node distances:
node  0  1  2  3
  0:  10  11  21  21
  1:  11  10  21  21
  2:  21  21  10  11
  3:  21  21  11  10
```

```
From /proc/meminfo
MemTotal:          791188784 kB
HugePages_Total:      0
Hugepagesize:       2048 kB
```

```
From /etc/*release* /etc/*version*
SuSE-release:
  SUSE Linux Enterprise Server 12 (x86_64)
  VERSION = 12
  PATCHLEVEL = 4
  # This file is deprecated and will be removed in a future service pack or release.
  # Please check /etc/os-release for details about this release.
os-release:
  NAME="SLES"
  VERSION="12-SP4"
  VERSION_ID="12.4"
  PRETTY_NAME="SUSE Linux Enterprise Server 12 SP4"
  ID="sles"
  ANSI_COLOR="0;32"
  CPE_NAME="cpe:/o:suse:sles:12:sp4"
```

```
uname -a:
Linux 135-178-171 4.12.14-94.41-default #1 SMP Wed Oct 31 12:25:04 UTC 2018 (3090901)
x86_64 x86_64 x86_64 GNU/Linux
```

Kernel self-reported vulnerability status:

```
CVE-2017-5754 (Meltdown):          Not affected
CVE-2017-5753 (Spectre variant 1): Mitigation: __user pointer sanitization
CVE-2017-5715 (Spectre variant 2): Mitigation: Indirect Branch Restricted Speculation,
IBPB, IBRS_FW
```

run-level 3 Aug 7 15:13

```
SPEC is set to: /home/cpu2017
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/sda3       xfs   145G  8.1G  137G   6% /home
```

Additional information from dmidecode follows. WARNING: Use caution when you interpret

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperServer 1029U-TR4 (X11DPU , Intel Xeon Gold 5222)

SPECrate®2017\_int\_base = 65.4

SPECrate®2017\_int\_peak = 67.7

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** Aug-2019  
**Hardware Availability:** Apr-2019  
**Software Availability:** May-2019

### Platform Notes (Continued)

this section. The 'dmidecode' program reads system data which is "intended to allow hardware to be accurately determined", but the intent may not be met, as there are frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.

BIOS American Megatrends Inc. 3.1 04/29/2019  
Memory:

24x Micron Technology 36ASF4G72PZ-2G9E2 32 GB 2 rank 2933, configured at 2934

(End of data from sysinfo program)

### Compiler Version Notes

=====  
C | 502.gcc\_r(peak)  
-----

Intel(R) C Intel(R) 64 Compiler for applications running on IA-32, Version  
19.0.4.227 Build 20190416  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.  
-----

=====  
C | 500.perlbench\_r(base, peak) 502.gcc\_r(base) 505.mcf\_r(base, peak)  
525.x264\_r(base, peak) 557.xz\_r(base, peak)

Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.4.227 Build 20190416  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.  
-----

=====  
C | 502.gcc\_r(peak)  
-----

Intel(R) C Intel(R) 64 Compiler for applications running on IA-32, Version  
19.0.4.227 Build 20190416  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.  
-----

=====  
C | 500.perlbench\_r(base, peak) 502.gcc\_r(base) 505.mcf\_r(base, peak)  
525.x264\_r(base, peak) 557.xz\_r(base, peak)

Intel(R) C Intel(R) 64 Compiler for applications running on Intel(R) 64,  
Version 19.0.4.227 Build 20190416  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.  
-----  
=====

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperServer 1029U-TR4 (X11DPU , Intel Xeon Gold 5222)

SPECrate®2017\_int\_base = 65.4

SPECrate®2017\_int\_peak = 67.7

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** Aug-2019  
**Hardware Availability:** Apr-2019  
**Software Availability:** May-2019

### Compiler Version Notes (Continued)

C++ | 523.xalancbmk\_r(peak)

-----  
Intel(R) C++ Intel(R) 64 Compiler for applications running on IA-32, Version 19.0.4.227 Build 20190416  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.  
-----

=====  
C++ | 520.omnetpp\_r(base, peak) 523.xalancbmk\_r(base)  
531.deepsjeng\_r(base, peak) 541.leela\_r(base, peak)

Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64, Version 19.0.4.227 Build 20190416  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.  
-----

=====  
C++ | 523.xalancbmk\_r(peak)

-----  
Intel(R) C++ Intel(R) 64 Compiler for applications running on IA-32, Version 19.0.4.227 Build 20190416  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.  
-----

=====  
C++ | 520.omnetpp\_r(base, peak) 523.xalancbmk\_r(base)  
531.deepsjeng\_r(base, peak) 541.leela\_r(base, peak)

Intel(R) C++ Intel(R) 64 Compiler for applications running on Intel(R) 64, Version 19.0.4.227 Build 20190416  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.  
-----

=====  
Fortran | 548.exchange2\_r(base, peak)

-----  
Intel(R) Fortran Intel(R) 64 Compiler for applications running on Intel(R) 64, Version 19.0.4.227 Build 20190416  
Copyright (C) 1985-2019 Intel Corporation. All rights reserved.  
-----

### Base Compiler Invocation

C benchmarks:  
icc -m64 -std=c11

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperServer 1029U-TR4 (X11DPU , Intel Xeon Gold 5222)

SPECrate®2017\_int\_base = 65.4

SPECrate®2017\_int\_peak = 67.7

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** Aug-2019  
**Hardware Availability:** Apr-2019  
**Software Availability:** May-2019

## Base Compiler Invocation (Continued)

C++ benchmarks:

icpc -m64

Fortran benchmarks:

ifort -m64

## Base Portability Flags

500.perlbench\_r: -DSPEC\_LP64 -DSPEC\_LINUX\_X64  
502.gcc\_r: -DSPEC\_LP64  
505.mcf\_r: -DSPEC\_LP64  
520.omnetpp\_r: -DSPEC\_LP64  
523.xalancbmk\_r: -DSPEC\_LP64 -DSPEC\_LINUX  
525.x264\_r: -DSPEC\_LP64  
531.deepsjeng\_r: -DSPEC\_LP64  
541.leela\_r: -DSPEC\_LP64  
548.exchange2\_r: -DSPEC\_LP64  
557.xz\_r: -DSPEC\_LP64

## Base Optimization Flags

C benchmarks:

-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div  
-qopt-mem-layout-trans=4  
-L/usr/local/IntelCompiler19/compilers\_and\_libraries\_2019.4.227/linux/compiler/lib/intel64  
-lqkmalloc

C++ benchmarks:

-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div  
-qopt-mem-layout-trans=4  
-L/usr/local/IntelCompiler19/compilers\_and\_libraries\_2019.4.227/linux/compiler/lib/intel64  
-lqkmalloc

Fortran benchmarks:

-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div  
-qopt-mem-layout-trans=4 -nostandard-realloc-lhs -align array32byte  
-L/usr/local/IntelCompiler19/compilers\_and\_libraries\_2019.4.227/linux/compiler/lib/intel64  
-lqkmalloc





# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperServer 1029U-TR4 (X11DPU , Intel Xeon Gold 5222)

SPECrate®2017\_int\_base = 65.4

SPECrate®2017\_int\_peak = 67.7

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** Aug-2019  
**Hardware Availability:** Apr-2019  
**Software Availability:** May-2019

## Peak Compiler Invocation

C benchmarks (except as noted below):

```
icc -m64 -std=c11
```

```
502 gcc_r: icc -m32 -std=c11 -L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/ia32_lin
```

C++ benchmarks (except as noted below):

```
icpc -m64
```

```
523.xalancbmk_r: icpc -m32 -L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/ia32_lin
```

Fortran benchmarks:

```
ifort -m64
```

## Peak Portability Flags

```
500.perlbench_r: -DSPEC_LP64 -DSPEC_LINUX_X64  
502 gcc_r: -D_FILE_OFFSET_BITS=64  
505.mcf_r: -DSPEC_LP64  
520.omnetpp_r: -DSPEC_LP64  
523.xalancbmk_r: -D_FILE_OFFSET_BITS=64 -DSPEC_LINUX  
525.x264_r: -DSPEC_LP64  
531.deepsjeng_r: -DSPEC_LP64  
541.leela_r: -DSPEC_LP64  
548.exchange2_r: -DSPEC_LP64  
557.xz_r: -DSPEC_LP64
```

## Peak Optimization Flags

C benchmarks:

```
500.perlbench_r: -w1,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo  
-xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=4  
-fno-strict-overflow  
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/intel64  
-lqkmalloc  
  
502 gcc_r: -w1,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo  
-xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=4  
-L/usr/local/je5.0.1-32/lib -ljemalloc  
  
505.mcf_r: -w1,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div  
-qopt-mem-layout-trans=4
```

(Continued on next page)



# SPEC CPU®2017 Integer Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperServer 1029U-TR4 (X11DPU , Intel Xeon Gold 5222)

SPECrate®2017\_int\_base = 65.4

SPECrate®2017\_int\_peak = 67.7

**CPU2017 License:** 001176

**Test Sponsor:** Supermicro

**Tested by:** Supermicro

**Test Date:** Aug-2019

**Hardware Availability:** Apr-2019

**Software Availability:** May-2019

## Peak Optimization Flags (Continued)

505.mcf\_r (continued):

```
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/intel64
-lqkmalloc
```

525.x264\_r: -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div

```
-qopt-mem-layout-trans=4 -fno-alias
```

```
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/intel64
-lqkmalloc
```

557.xz\_r: Same as 505.mcf\_r

C++ benchmarks:

520.omnetpp\_r: -Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div

```
-qopt-mem-layout-trans=4
```

```
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/intel64
-lqkmalloc
```

523.xalancbmk\_r: -Wl,-z,muldefs -prof-gen(pass 1) -prof-use(pass 2) -ipo

```
-xCORE-AVX512 -O3 -no-prec-div -qopt-mem-layout-trans=4
```

```
-L/usr/local/je5.0.1-32/lib -ljemalloc
```

531.deepsjeng\_r: basepeak = yes

541.leela\_r: Same as 520.omnetpp\_r

Fortran benchmarks:

```
-Wl,-z,muldefs -xCORE-AVX512 -ipo -O3 -no-prec-div
```

```
-qopt-mem-layout-trans=4 -nostandard-realloc-lhs -align array32byte
```

```
-L/usr/local/IntelCompiler19/compilers_and_libraries_2019.4.227/linux/compiler/lib/intel64
-lqkmalloc
```

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/Intel-ic19.0u1-official-linux64.2019-07-09.html>

<http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-CLX-revC.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2017/flags/Intel-ic19.0u1-official-linux64.2019-07-09.xml>

<http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-CLX-revC.xml>



# SPEC CPU<sup>®</sup>2017 Integer Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

## Supermicro

SuperServer 1029U-TR4 (X11DPU , Intel Xeon Gold 5222)

SPECrate<sup>®</sup>2017\_int\_base = 65.4

SPECrate<sup>®</sup>2017\_int\_peak = 67.7

**CPU2017 License:** 001176  
**Test Sponsor:** Supermicro  
**Tested by:** Supermicro

**Test Date:** Aug-2019  
**Hardware Availability:** Apr-2019  
**Software Availability:** May-2019

SPEC CPU and SPECrate are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester. For other inquiries, please contact [info@spec.org](mailto:info@spec.org).

Tested with SPEC CPU<sup>®</sup>2017 v1.0.5 on 2019-08-07 03:28:30-0400.  
Report generated on 2019-09-03 14:48:58 by CPU2017 PDF formatter v6255.  
Originally published on 2019-09-03.